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ABSTRACT

About 60 percent of Binghamton's pupil population come from low income families; close to 1,000 pupils are provided remediation under Chapter 1 of the Education Consolidation and Improvement Act. This program provides educationally and economically needy people with ways to succeed. The program's attributes for success are as follow: (1) clear goals and objectives; (2) coordination with regular school programs; (3) parent/community involvement; (4) professional development and training; (5) strong leadership; (6) appropriate instructional materials, methods, and approaches; (7) high expectations for student learning and behavior; (8) positive school/classroom climate; (9) maximum use of academic learning time; (10) closely monitored student progress; (11) regular feedback and reinforcement; (12) excellence recognized and rewarded; and (13) evaluation results used for project improvement. Normal curve equivalents reveal substantial gains in both reading and math. The largest gains were made in schools with the highest concentration of low income students. Improved attendence and school behavior, coupled with decreased tardiness and dropout rate, are directly linked to the overall success of Chapter 1 reading and math instruction. (LHW)

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Binghamton City School District
98 Oak Street
Binghamton, NY 13902

12/8/86

Remedial Program Description

ED277775

II. PROJECT DESCRIPTION/ATTRIBUTES OF SUCCESS

About 60 percent of Binghamton's pupil population come from low income families and close to 1000 pupils are provided remediation under Chapter 1. While the students are both educationally and economically very needy, the Chapter 1 program has provided a way for these pupils to succeed. There are high expectations for pupils and teachers. All pupils can learn and Chapter 1 makes it happen without feelings of failure. Work is carefully structured so that pupils can master it, and the classroom and remedial staff maintain close contact to coordinate instruction. Intensive individual instruction is given in small group settings in which common group needs are established through diagnosis and prescription. Pupil progress is constantly monitored, and gains are consistently shown.

1. CLEAR GOALS AND OBJECTIVES

Binghamton's goal is to provide a successful intervention program for high risk students. We assure that all students identified as in need of remediation are provided with the basic skills to allow them to experience success in the regular school program and to allow them to function in our society as productive citizens. In-school goals allow students to recapture missed academic skills so that they can function at the appropriate grade level, while the terminal goal is for pupils to have skills for life, e.g., make change, read the weather report, and be voting citizens of the community.

To attain these goals, project objectives are:

- Every learner identified as in need of Chapter 1 remediation in reading will attain significant improvement in these subjects from pre- to post-test as measured by the Reading Comprehension scores of the California Achievement Test (1978), administered in September and May of the school year. The improvement will be statistically significant at the .05 level. Thus the intervention program will have made a difference in the pupil's reading progress.

- Every learner identified as in need of Chapter 1 remediation in mathematics will attain significant improvement in these subjects from pre- to post-test as measured by the Total Math scores of the California Achievement Test (1978), administered in September and May of the school year. The improvement will be statistically significant at the .05 level. Thus the intervention program will have made a difference in the pupil's math progress.

- Chapter 1 and classroom staff will integrate their programs through communication, support, and curriculum coordination as evidenced by feedback and the implementation of formal and informal regularly scheduled meetings.

These goals and objectives were identified in consultation with parents, remedial and classroom teachers, administrators, and Board members. Meetings held in the early 1980's with the various groups resulted in

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adoption of these goals and objectives. Project and district goals and objectives are regularly communicated to students, parents, teachers, and others by public presentations, newsletters, faculty meetings, the media, parent/teacher conferences, and at various school open-house events.

The objectives are attained and reinforced by pre- and post-testing during a Fall/Spring test cycle, and through formal and informal meetings between remedial and regular teachers to assess student progress. Typically, remedial teachers diagnose individual student needs and prescribe remedial work. These assessments and prescriptions are shared with the classroom teachers, who in turn assist in remediation and academic reinforcement efforts. Every teacher receives a booklet suggesting a range of simple to complex ideas to help pupils in remediation. For example, classroom teachers may redefine homework assignments for Chapter 1 pupils so that they can accomplish the work and feel good about it, about themselves, and about the school.

In addition to tailoring instruction to individual needs, there are reviews by remedial teachers of each student's regular classroom work, assignments, tests, and workbooks, and a follow-up meeting or written communication between regular and remedial teachers highlights student progress based on these reviews. Record cards show each student's diagnosed weaknesses, prescribed remediation, and achievement progress in remedial and regular classroom vis a vis these weaknesses. Individual pupil folders showing dated samples of student work are maintained as evidence of improvement, and all staff are encouraged to consult these folders when designing instruction. During the school year, in instances where student progress is deemed to be less than expected, the principal, remedial teacher, and regular teachers meet to review student progress, reassess student needs and, if necessary, modify remedial efforts.

2. COORDINATION

Chapter 1 goals compliment the regular school program. The goals are aimed at helping students who are in need of remediation achieve success in the regular school program. In addition, one of the overarching goals of the regular school curriculum is to assure each child achieves success in the total school program.

To ensure that Chapter 1 and school goals mesh, both formal and informal meetings between regular and remedial teachers regularly occur. A schedule for these meetings is established before the school year begins, with additional meetings scheduled by teachers as needs arise. Written records of these meetings include the names of students discussed, topics of discussion, views of each teacher, and the curricular and instructional decisions reached. These reports are then filed in the pupil's remedial folder, and an individual record card is maintained which shows the dates of all formal and informal meetings between remedial and regular teachers. These records are regularly monitored by the principal and remedial program coordinator, and the extent to which the Chapter 1 goals are being met is documented. Reading and math instruction for Chapter 1 eligible students

can then be systematically tailored to meet individual needs.

To make this possible at the elementary level, Chapter 1 staff schedule formal meetings with regular classroom teachers once a month. Remedial instruction on these days is cancelled, and Chapter 1 teachers have the entire day to meet with regular classroom teachers to plan instruction and to assure that pupils are progressing satisfactorily. At the secondary level, substitute teachers are provided to allow the Chapter 1 teacher ample time to meet with regular teachers. Generally this occurs for a full day once every four or five weeks. Informal meetings also help to strengthen the coordination between Chapter 1 and regular school programs. These meetings, which take place on a daily basis, are recorded on a form showing the date, what was discussed and by whom, and are placed in the pupil folder.

Remedial teachers are provided with curriculum sheets showing the reading and mathematics objectives taught at each grade level. They, in turn, gear their remedial instruction as closely as possible to the mandated curriculum, and coordinate activities and materials with regular classroom instruction. In addition. all regular classroom teachers are provided with a booklet of suggestions as to how they can assist in the remediation and reinforcement process. This booklet, which addresses each grade level, contains relevant activities and processes that can be used in the regular classroom to enhance the efforts of the Chapter 1 project.

Classroom teachers are able to secure instructional kits, games, and other curricular materials from remedial teachers which can be used in the regular classroom to meet the specific needs of Chapter 1 students. The remedial teachers, therefore, are viewed as a resource not only by students, but also by the classroom teachers.

These efforts are collectively monitored by reading and math curriculum directors, building principals, and the director of remedial programs. Principals use faculty meetings as a forum for discussing the need for program coordination and to assist staff in making every effort to work closely together to benefit students receiving remediation. Departmental meetings in English and math are used in a similar fashion to increase the coordination between Chapter 1 and other school programs.

To ensure that classroom teachers are particularly aware of Chapter 1 classroom activities, every effort is made to have them visit the remedial classrooms. This is accomplished by having regular staff visit Chapter 1 classrooms to review kits, games, software, and books available on loan from the Chapter 1 project. This occurs during teacher planning time, lunch time, and before and after school. Similarly, remedial teachers are encouraged to visit regular classrooms while classes are in session. This, too, takes place during planning time.

Remedial teachers report regularly at faculty meetings about current, planned, or new Chapter 1 efforts, thus keeping all staff apprised of the activities being conducted with Chapter 1 students.

Because the district has a comprehensive computer literacy and computer

aided remedial program, and since both classroom and remedial teachers have many students who use the different computers, coordinating instruction via computer is, of necessity, an ongoing task. All of the instructional software is reviewed by classroom and remedial teachers during the summer months, and a booklet is provided to all staff listing the software, the skills each program teaches, their difficulty levels, and their interest levels for various age groups. Each school building maintains a software library and a computer room, and computers are used in every Chapter 1 classroom. In order to ensure that computer use appropriate for each student's prescribed instructional plan occurs, weekly meetings are held between all Chapter 1 and classroom teachers. Each student's progress is monitored and reported in the individual record cards, and the level of difficulty of each software program is adjusted in accordance with the student's progress in both the Chapter 1 and regular school program.

3. PARENT/COMMUNITY INVOLVEMENT

Several meetings are held during the school year with parents of remedial students. One is a general meeting for project planning and evaluation. Two other meetings also involve community members visiting the schools. At these open house/parent conference times, student progress is discussed, and the Chapter 1 project is described. Comments about possible project improvements are sought from parents on these occasions, and suggestions addressing specific program strengths and weaknesses--such as those related to eligible student selection, evaluation reporting, and program effectiveness--are readily incorporated into curriculum and instruction. In addition to meetings, written communication with parents is regularly maintained. Parents receive an informal progress note and samples of student work on a monthly basis. Parents also receive a formal progress report and a sample of their child's work every 10 weeks.

In order to solicit parents' active involvement in student achievement, the district has established a pilot program at the elementary grades in which Home Visiting Teachers meet with parents and guardians of all remedial students. During these visits, parents are loaned educational games, kits, books, and magazines, and are shown how to use these with their children. Parents are also given some direction in assisting their children with homework. They are encouraged to emphasize the value of education with their children, and the importance of expressing high expectations for their children's achievement.

In addition, parents of both Chapter 1 eligible students and non-Chapter 1 students are encouraged to participate as volunteers in Chapter 1 classes. A number of parents are now working throughout the district as volunteers, and many work with other school programs as well. Volunteers help teachers by assisting with record keeping and by providing direct student help in computer use and classroom monitoring.

* 4. PROFESSIONAL DEVELOPMENT AND TRAINING

The district maintains an ongoing staff development program for Chapter 1 and regular classroom staff. For all Chapter 1 staff, one afternoon each

month is set aside for inservice in (1) reading and math instructional strategies and materials, (2) Chapter 1 guidelines, and (3) learning theory. A plan for staff development is devised each fall and is followed throughout the year. Briefly, this plan incorporates a number of inservice activities, group presentations, and discussions into the regular academic year, and suggestions for staff development retreats and summer workshops. The planning activities stress that effective instruction and successful leadership necessitate ongoing staff development. Thus all teachers, aides, and administrators are always involved in both the planning and dissemination of inservice activities.

The Chapter 1 Project has funded the training of two teacher trainers, 120 teachers, and 40 administrators in the Elements of Effective Teaching and Clinical Supervision. This system gives the staff a common language and set of principals upon which to base their teaching. For example, "lesson closure" is used daily by the pupils to exhibit what they learned during the class period. Because of this and similar other strategies, teachers are keenly aware of which students know what material and, perhaps most importantly, the pupils leave the class knowing they know the material. The district is now continuing this effort with its own and state funds. Ultimately, all remedial and regular staff will be trained in the Elements of Effective Teaching, which will lead to increased monitoring and improved evaluation of student progress.

The district also encourages Chapter 1 staff to regularly attend reading and mathematics conferences, conventions, and workshops with regular classroom teachers, including those held at the local, state, and national level. Paid leave time is arranged, substitutes are supplied, and assistance is provided to those teachers planning to present papers or workshops.

* 5. STRONG LEADERSHIP

All principals, the reading and math curriculum directors, and the director of remedial programs participate in all programs involving remedial projects, including: parent meetings, open houses, and parent planning meetings. Every central office administrator, including the Superintendent, and all building principals visit classrooms on a regular basis. During such visits, the principals, the reading and math curriculum coordinators, and the director of remedial programs observe lessons, counsel teachers in instructional improvement, discuss the program with students, and evaluate remedial program intervention. A written report is issued to the teachers, and a meeting between the teacher and administrator is held to discuss the lesson. The record, signed by the teacher and administrator, goes to the Associate Superintendent, who in turn reviews the report and initiates program changes as necessary.

Principals systematically involve classroom teachers in the remedial program by facilitating regular coordination meetings. The curriculum directors emphasize this effort by monitoring and encouraging regular classroom teachers to share information about students in remedial programs with remedial staff. And as previously mentioned, the director of remedial

programs has developed a booklet of suggested activities which all regular teachers now use to help plan instruction for remedial students. This type of interdepartmental cooperation is indicative of the extent to which strong leadership is evidenced at all staff levels in the Binghamton City School System.

Regular monthly meetings are held between the remedial program director and remedial teachers as well as by the reading and math curriculum coordinators and remedial staff. In addition, regular monthly meetings are held between the principals and school remedial staff. Agenda items are typically issues raised by remedial teachers. Every effort is made to establish meetings where all staff are able to be candid about concerns, issues, and problems. To this end, teachers are encouraged to submit agenda items. In fact, a special form for this purpose has been developed and is in use, with a large proportion of our teachers frequently contributing their concerns as important agenda items.

The principals and remedial program director make every effort to secure favorable media stories about the program as a means of securing public support and understanding, and as a means of promoting a "team spirit" among remedial staff. As previously noted, principals, the curriculum directors, and the remedial director take advantage of opportunities to meet with parents and the public. In so doing, the strong leadership present in our school system is communicated to the general public, with the end result being increased support for and understanding of the variety of important curricular and instructional considerations necessary to realize Chapter 1 program effectiveness.

* 6. <u>APPROPRIATE INSTRUCTIONAL MATERIALS, METHODS, AND APPROACHES</u>

The Chapter 1 project is a pull-out project to a remedial lab. Each remedial classroom has computers and an array of electronic and paper learning kits, games, and books. Likewise, all teachers have an extensive instructional repertoire, with specific materials and approaches used in the remedial classroom based upon the individual needs of the children served. Teachers take into account student interests, abilities, and past achievement in determining when group instruction, individual instruction, peer instruction (i.e., Cooperative Team Learning), tutoring, or use of various learning materials is most appropriate. Once an appropriate approach and materials are selected, teachers monitor student progress to assure that success is occurring. When modifications are required to adjust to student learning pace or ability, such adjustments are easily made. Such modifications are the result of regular discussions between remedial teachers, classroom teachers, and students.

As part of the diagnostic-prescriptive approach we have adopted, teachers give pre- and post-lesson and/or unit tests. These help to monitor student progress and to measure student success. Since our aim is to promote student success, materials and approaches which foster failure are avoided. Student learning styles, therefore, are accommodated in that professional knowledge and individual opinion operate hand-in-hand to shape the instruction each student receives.

Because the Binghamton City School District recognizes the uniqueness of each child and because the remedial classes are generally quite small, remedial teachers are encouraged to be selective in their use of materials, equipment, and methods. Teachers are asked to select approaches and materials appropriate to the individual needs of the children they serve. Teachers determine which students require which approaches/materials based on the district's instructional objectives, and by using data on student ability, needs, and interests. All materials and equipment are selected by the teachers themselves. First, during summer months, teachers review materials and recommend purchases. Second, each remedial teacher is provided with funds annually to purchase materials. The key direction given to teachers is to use what works and to discard or cease using what doesn't. At remedial staff meetings, teachers share their experiences with particular approaches and materials. In addition, teachers are encouraged to evaluate the quality of the materials, equipment, and methods. Students and classroom teachers are sought out for their reactions to the quality of materials and methods. As a result, materials/approaches that are ineffective are weeded out. This is an on-going process, and one in which students, teachers, administrators, and parents have frequently noted their personal and/or professional satisfaction.

Since Chapter 1 classes are small and have an extensive amount of equipment and materials, students have an opportunity to learn through a variety of means. Electronic equipment and computers are commonly used for drill, and kits and games are used for guided practice. Student tutors, group teaching, one-on-one help, and classroom presentations are also used. Helping students to achieve positive self-esteem is a key to our project, and one we believe is paramount to student learning and success in life.

7. HIGH EXPECTATIONS FOR STUDENT LEARNING AND BEHAVIOR

Remedial teachers and classroom teachers regularly share information about student progress. Students in both regular and remedial classes display their work in the remedial rooms, in classrooms, and in corridors. Students regularly convey to classroom teachers their accomplishments in remedial classes, and all students are urged to relate their successes as well as their problems and failures to classroom and remedial teachers.

At the beginning of the school year, remedial teachers diagnose pupil problems and share that information with them. Goals for individual students are then defined, and students are made aware that help will be provided to assist them in achieving these goals. Such student goals are based on student ability as measured by standardized testing (See Attribute #1). While long term goals are set by teachers, the pupils themselves set short term goals, e.g., working on a problem or concept encountered in regular classroom instruction.

Because classroom teachers recognize the high caliber of materials used for instruction with the Chapter 1 students, they frequently incorporate Chapter 1 materials into their daily lessons. The fact that they do this signals to all students that to be singled out for remediation only means

see "their material" used with all students, and high expectations for their scholastic achievement are invariably communicated.

8. POSITIVE SCHOOL/CLASSROOM CLIMATE

Principals and teachers are constantly involved in making sure the school and every one of its classrooms is safe and orderly. A school code of conduct exists at every building and is made available to all pupils and their parents. The Code is the product of parent, student, and faculty work over an extended period of time, and is revised and publicized on an annual basis. Within the orderly climate we strive to maintain, classes are relaxed and students enjoy both the Chapter 1 and other classes. The training in the teaching-learning process and the variety of materials and approaches that can be tailored to meet individual needs, makes our school system as interesting a place to learn as it is to teach.

Principals have been directed to be highly visible during the school day. It is not uncommon to find principals visiting each classroom every day. Through praise and recognition, students and staff are encouraged to participate in keeping the school climate positive and conducive to learning.

In addition, all principals and some teachers have been trained in assertive discipline techniques, and Hunter's Model of Teacher-Learning is extensively used. This model, of course, enhances positive learning and school climate by keeping students interested in the learning that occurs. The adoption of this model, together with numerous other techniques and strategies for promoting a positive school and classroom climate, is indicative of the extent to which successful staff development and regular communication promote Chapter 1 program effectiveness.

9. MAXIMUM USE OF LEARNING TIME

The staff development opportunities and inservice teacher training emphasizes keeping students on task for the full teaching period. Materials appropriate to the pupil's age and the variety of instructional activities keep pupils involved so that there is a very low instance of classroom disruption or inattentiveness. All pupils have individual work folders which they use for daily assignments. In addition, every Chapter 1 class has a variety of learning kits/games/books, etc. to be used when students finish work ahead of schedule.

To ensure reinforcement of Chapter 1 project instruction, students are assigned projects that involve library use, community interviews after school, and individualized amounts of homework. In addition, the district is piloting a home visitor program in the elementary grades that will assist parents in helping their children achieve high standards of academic success. These types of instructional "extras" help to maximize learning time during the school day, and promote extended learning schedules beyond the classroom environment.

10. CLOSELY MONITORED STUDENT PROGRESS

Standardized tests are given annually. In addition, parents and remedial teachers meet several times during the school year to review student progress, which in turn is monitored by weekly and monthly skill tests to determine the extent of individual progress. Teachers regularly share this information with students and, as often as possible, with parents. Records of student progress are maintained on the student record card, skills lists, and by maintaining student work samples. Parents receive monthly formal written reports on student progress, and are regularly consulted by phone during important changes in curriculum and/or instruction.

The extent to which each pupil masters the instructional objectives corresponding to his or her grade level is closely monitored through our record and reporting system. Achievement data (discussed elsewhere in this document) and personal data are closely matched to ability levels and instructional strategies. Remedial teachers use both written and verbal feedback to adjust the pace of instruction or to reteach skills. Classroom and remedial teachers share information about pupils and areas needing additional instruction. A record sheet is used to systematically follow up with such problems.

11. REGULAR FEEDBACK AND REINFORCEMENT

Skills testing is carried out on a weekly and on a monthly basis, and students are provided with quick feedback of the results. They are informed of their progress, and any changes in the instruction they receive are carefully and fully associated with each student's needs. Monthly written reports and samples of student work are sent home to parents, with copies maintained in student folders. Progress sheets, the result of the many meetings that occur among classroom and Chapter 1 staff, are maintained in student folders as well. Both teachers and the students themselves keep track of and record progress.

Computer quizzes are used on a regular, scheduled basis, and because they give immediate feedback to both teachers and students, they are viewed as an important resource for feedback and reinforcement. Remedial teachers meet regularly with classroom teachers and students to review progress and to discuss ways in which students can be more thoroughly informed of their daily progress. Daily informal meetings are encouraged, and remedial teachers meet with parents at least twice a year, and more often if needed. Collectively, these meetings, our in-depth record keeping system, and our extensive communication network between students, teachers, administrators, and parents allows for a high degree of academic feedback and instructional reinforcement.

12. EXCELLENCE RECOGNIZED AND REWARDED

Student excellence is recognized in a number of ways. Student work samples are displayed throughout classrooms and corridor areas. Parents receive reports from the school which are positive in nature and show

samples of improving pupil work, and pupils are continuously praised for their work. All schools hold open house programs and parent conference nights; at these occasions, student work is displayed and remedial teachers have an opportunity to review student work with parents.

Outstanding teachers are recognized by administrators at faculty meetings. Project teachers performing in an exemplary fashion are often asked to serve as mentor to other teachers. These "master teachers" demonstrate lessons for other teachers and work to improve the overall quality of instruction. They are asked to address other faculty and to speak at conferences on reading, math, and remedial education. These teachers also work with district level staff in developing and validating their remedial programs. The local newspapers often feature articles on the remedial staff and the Chapter 1 project in general, and on our Master Teacher program in particular.

* 13. EVALUATION RESULTS USED FOR PROGRAM OR PROJECT IMPROVEMENT

The project is evaluated annually by district staff, remedial staff, administrators, and parents. Both qualitative and quantitative data are examined for possible trouble spots as well as superior performance. Past evaluations which indicated aspects of marginal effectiveness ultimately lead to the revitalization of specified aspects of those programs. Many of those program aspects receiving repeated poor performance reports have been eliminated, thus increasing the overall quality of the project.

Data about project achievement is disseminated through reports issued to project staff, principals, faculties, the Board of Education, and, through them, to the community. The director of remedial programs meets regularly with individual principals, the curriculum coordinators, and teachers to review the program, its effectiveness, its progress, and steps needed to achieve an even more outstanding Chapter 1 reading and mathematics program.

Both formal and informal requests are made to remedial and classroom faculty planning groups for comments, ideas, and suggestions for project improvement. Changes in the program result from these suggestions.

III. PROJECT EFFECTIVENESS AND ACHIEVEMENT

The Binghamton Public Schools uses the 1978 edition of the California Achievement test to assess the effectiveness of its Chapter 1 programs. A Fall/Spring testing cycle has been implemented, and results are used to provide data related to a number of system-wide needs. One of these needs, of course, is to assess compensatory education data over time to better understand longitudinal project impact.

Table 1, which provides the project's achievement score gains in normal curve equivalents (NCE) by grade level, shows national, state, and local

reading and mathematics data for the 1983-84 school year. Table 2 shows the same data for the 1984-85 school year. Graphs have been provided to better illustrate the success of the Binghamton Chapter 1 program.

The NCE gains in both reading and math are substantial. At individual schools in the District similar gains were made, with the largest gains made in schools with the highest concentrations of low income students.

A comparison of the 1983-84 and 1984-85 gains gives some idea of the maintenance of academic growth. In addition to these data, sustained gains studies undertaken in 1984 and 1985 demonstrated that more than 75 percent of individual participants in the project sustained their gains. These studies tracked students participating in the Chapter 1 project through two academic years of instruction. For one study, three grade levels were selected in the project's mathematics component, and students' test scores were noted over a 3-point testing interval (pre/post/pre). The same methodology was employed to assess the sustained gains realized in the reading component of the project. In both studies, at each of the three grade levels, students scored higher at the third testing point than they did at test point one. In two instances the third test point was higher than either of the other two. Table 3 illustrates the results of these studies. Graphs are again provided to assist interpretation.

In addition to using these quantitative achievement indicators to evaluate program effectiveness, we look at attendance improvement, dropout rate, tardiness, and school behavior. In general, we have found that improved attendance and school behavior, coupled with decreased tardiness and dropout rate, is directly linked to the overall success of our Chapter 1 reading and math instruction.

Students released from the project are carefully monitored by regular classroom teachers to be sure additional remediation is not required. In addition, Chapter 1 teachers periodically touch base with the student. Remedial staff also discuss student performance with regular teachers after release from the program. When it is discovered that a student is having difficulty, remedial and regular staff develop special programs that are then used to help the student, without having to re-enroll that student into the Chapter 1 program. An annual review is made of promoted students using nationally standardized and state mandated test results. Virtually all students promoted out of the Binghamton City Schools Chapter 1 program remain out permanently.

It should also be noted that New York requires students to pass reading, math, and writing competency tests as a prerequisite to graduation. As a result of our remedial program, no Binghamton student has ever been denied a diploma for failing a New York State competency test.

Student success during remediation and subsequent to remediation does have an effect in terms of attendance, behavior, and achievement. Remedial students feel good about themselves and tend to miss school less often than before project treatment, complete regular classroom assignments more frequently than before, and do not misbehave in the regular classroom as had

been the case prior to remediation. This information is based on formal discussions with teachers and principals and periodic reviews of enrollment, attendance, and discipline data. The ratings which are given to improved affective behavior descriptive data are used to improve the program.

The gains shown in the tables closely reflect the kinds of gains seen in all of our schools; however, there appears to be even greater gains in the schools with the largest percentages of children from low income families. Moreover, the gains made in all schools parallel those we have experienced over the past five years. The gains made in these areas mirror the trends of the quantifiable data, and collectively support the notion that the Binghamton City Schools Chapter 1 program is continuing its tradition of excellence.

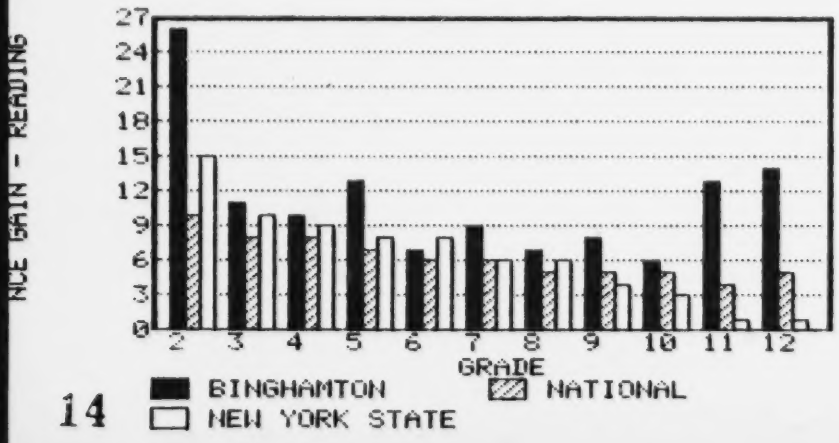
Table 1

Achievement Gains in NCEs
(Fall/Spring Testing Cycle)

1983-84

Grade	Reading USA	Reading NYS	Reading Binghamton	Mathematics USA	Mathematics NYS	Mathematics Binghamton
2	10	15	26	13	15	24
3	8	10	11	11	12	15
4	8	9	10	10	12	12
5	7	8	13	9	9	13
6	6	8	7	8	10	5
7	6	6	9	6	6	1
8	5	6	7	6	6	4
9	5	4	8	7	7	7
10	5	3	6	4	2	4
11	4	1	13	6	10	5
12	5	1	14	5	6	8

1983-84 ACHIEVEMENT DATA



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1983-84 ACHIEVEMENT DATA

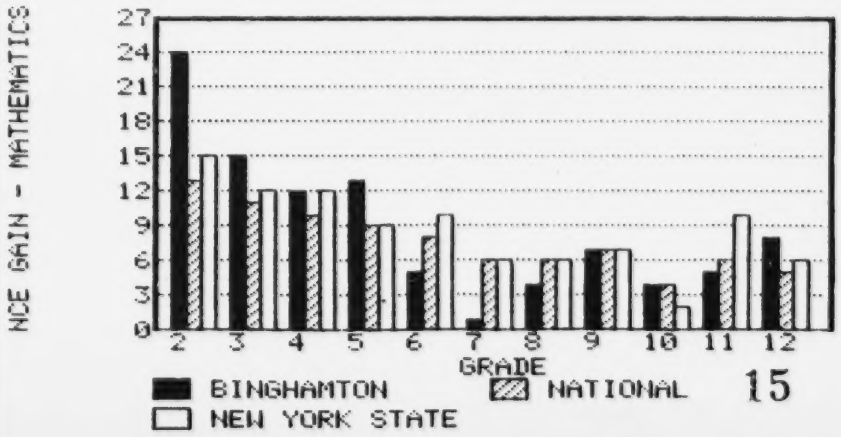

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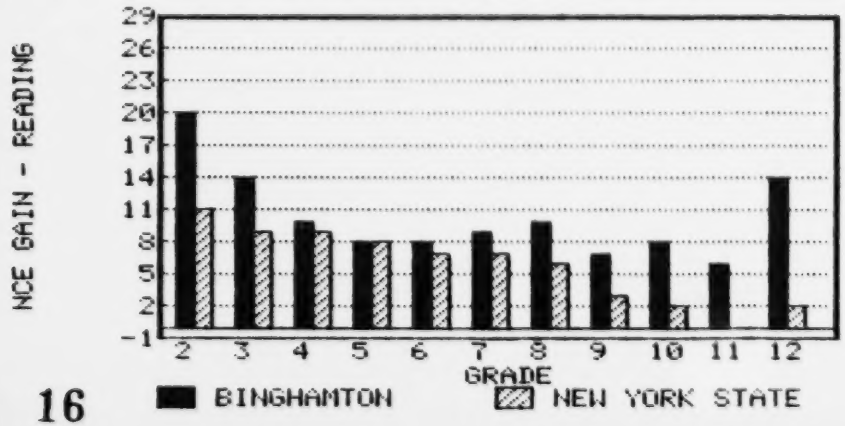
Table 2
Achievement Gains in NCEs
(Fall/Spring Testing Cycle)

1984-85

Grade	Reading			Mathematics		
	USA*	NYS	Binghamton	USA*	NYS	Binghamton
2		11	20		16	26
3		9	14		15	18
4		9	10		13	15
5		8	8		9	21
6		7	8		11	7
7		7	9		6	-1
8		6	10		5	2
9		3	7		5	6
10		2	8		3	8
11		0	6		5	3
12		2	14		4	6

* not available at the time this application was prepared

1984-85 ACHIEVEMENT DATA



1984-85 ACHIEVEMENT DATA

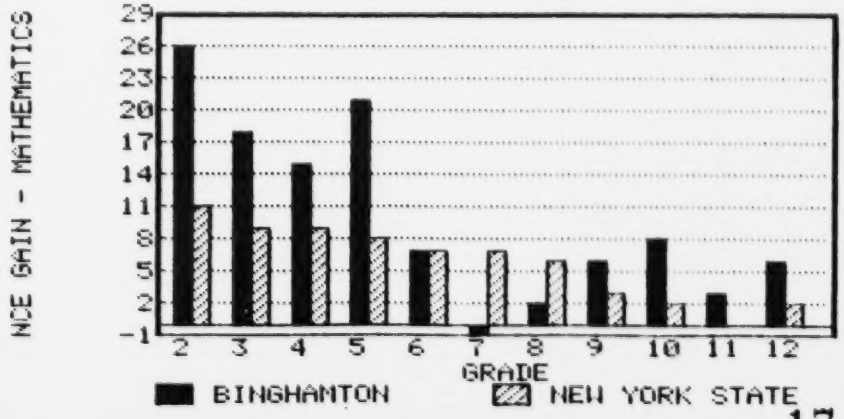


Table 3
Sustained Effects Study (1983-84 and 1985)

Reading Achievement

Mean Test Scores (in NCEs)

Grade at Test Point 1	Test Point 1 Fall, 1983	Test Point 2 Spring, 1984	Test Point 3 Fall, 1985
5	33.9	46.9	39.3
9	29.8	37.9	35.3
10	27.3	33.3	35.5

Mathematics Achievement

Mean Test Scores (in NCEs)

Grade at Test Point 1	Test Point 1 Fall, 1983	Test Point 2 Spring, 1984	Test Point 3 Fall, 1985
2	19.7	43.7	26.8
5	31.5	44.9	39.3
6	42.4	47.5	48.5